United States Patent [19]

Eriksson

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[54] **APPARATUS FOR PERFORMING RAISED DOT FORMATIONS**

[76] Inventor: **Bror A. Eriksson**, Skattkarrsvagen 36, S-650 10 Karlstad, Sweden

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[52] **U.S. Cl.** **400/122;** 434/113; 434/114

[58] **Field of Search** 400/122; 434/113, 114

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Primary Examiner—William Pieprz

Attorney, Agent, or Firm—Cushman, Darby & Cushman

[57] **ABSTRACT**

Readable Braille dot matrix formations are easily formed and utilized to print Braille books and the like. A belt forms an endless loop and has a number of small holes each for receiving a ball. An upper horizontal or slightly inclined path of the belt is supported by and drawn in contact with an underlying support. The belt has a smaller thickness than the diameter of the balls, and the uppermost parts of the balls extend above the upper face of the belt so that they may be tactilly perceived. Empty belt holes are filled with balls at a first area of the belt along its path, and some of the balls are selectively removed from the belt holes at another, second area along the looped path. Selective removal of the balls may be provided by disposing slots in the underlying support with piezoelectric bars providing movable obstacles in the slots. Alternatively electromagnets disposed above the balls may be provided.

9 Claims, 5 Drawing Figures